

new claims directed to the elected subject matter (the method claims being related to the elected system claims) are clearly not claiming the same invention as set forth in Claims 2 and 5-14 of U.S. Patent No. 5,526,643. Nor are these new claims an obvious variant over any claims in the above-identified patents.

Accordingly, reconsideration and favorable action upon the claims now in this application are earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #381TO/41670C4).

Respectfully submitted,

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James F. McKeown  
Registration No. 25,406

CROWELL & MORING, LLP  
P.O. Box 14300  
Washington, DC 20044-4300  
Telephone No.: (202) 624-2500  
Facsimile No.: (202) 628-8844

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## VERSION WITH MARKINGS TO SHOW CHANGES

### IN THE CLAIMS:

6. (Amended) A catalyst-deterioration diagnostic system for diagnosing a deterioration state of a catalyst [as defined in claims 4] comprising:

index means for obtaining a value of an index which is used for deciding the deterioration state of the catalyst;

catalyst state estimation means for estimating a state of said catalyst at a time at which said index means has obtained the index value, as to a physical quantity which affects a catalytic action of said catalyst;

correction means for correcting said index value obtained by said index means, to a value in a standard state of said catalyst previously set as to the physical quantity, by the use of the estimated result of said catalyst state estimation means; and

decision means endowed with a preset criterion value, and for deciding said deterioration state of said catalyst by comparing the index value corrected by said correction means, with the criterion value, wherein:

    said catalyst serves to eliminate noxious substances which are contained in exhaust gas of an engine; and

    said catalyst state estimation means includes [;]

    operating-situation detection means for detecting a value of that state variable of the engine which correlates with said physical quantity;

memory means for storing therein correspondence information which indicate correlations between values of the state variable and those of said physical quantity; and

arithmetic means for determining a value of said physical quantity by referring to the correspondence information on the basis of the detected result of said operating-situation detection means.

7. (Amended) [.] A catalyst-deterioration diagnostic system for diagnosing a deterioration state of a catalyst [as defined in claim 5], comprising:

index means for obtaining a value of an index which is used for deciding the deterioration state of the catalyst;

decision means endowed with a preset criterion value, and for deciding said deterioration state of said catalyst by comparing the index value obtained by said index means, with the criterion value;

catalyst state estimation means for estimating a state of said catalyst at a time at which said index means has obtained said index value, as to a physical quantity which affects a catalytic action of said catalyst; and

suspension means endowed with a predetermined range concerning the physical quantity, and for causing said decision means to suspend the decision on condition that a value of said physical quantity obtained by said catalyst state estimation means is outside the predetermined range, wherein:

    said catalyst serves to eliminate noxious substances which are contained in exhaust gas of an engine; and

    said catalyst state estimation means includes [;]

operating-situation detection means for detecting a value of that state variable of the engine which correlates with said physical quantity;

memory means for storing therein correspondence information which indicate correlations between values of the state variable and those of said physical quantity; and

arithmetic means for determining a value of said physical quantity by referring to the correspondence information on the basis of the detected result of said operating-situation detection means.